



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,804	07/09/2003	Tomomi Endo	Q76426	8069
23373	7590	02/20/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			GILMAN, ALEXANDER	
			ART UNIT	PAPER NUMBER
			2833	

DATE MAILED: 02/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/614,804	ENDO ET AL.	
	Examiner	Art Unit	
	Alexander Gilman	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2833

DETAILED ACTION

Information Disclosure Statement

Cover sheet for IDS with a list of references is missing.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 3, claims that "...recessed portion formed in a shape that the contact area is decreased gradually in accordance with a processing of the fitting movement". However, the specification and drawings do not present how the configuration of the recessed portion (32) affect the contact pressure during mating.

Accordingly, the claim has not been further treated on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Kashiyama et al

Art Unit: 2833

The applied reference has a common Assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With regard to claim 1, Kashiya et al (US 6,533,600) disclose a connector for preventing a half fitting condition comprises: a first connector (70), including a tab terminal and a projection (72)', a second connector (50), including a tab receiving terminal for electrical connection to the tab terminal and an elastic lock arm (62) for sliding over the projection when the second connector is fitted into the first connector', and a fitting detection member (60), mounted on the second connector so as to slide in a direction of fitting of the first and second connectors, wherein the fitting detection member is engaged with the elastic lock arm in a half fitting condition of the first and second connectors', and wherein the fitting detection member is slidable to a completely-fitted detecting position in a completely-fitted condition of the male and second connectors, wherein a reduction member (Fig. 5) which reduce a frictional force generated by a contact between the projection and the elastic lock arm is formed on at least one of the projection and the elastic lock arm.

With regard to claims 2-3, Kashiya et al disclose the reduction member (Fig. 5) has a recessed portion which reduces a contact area between the projection and the elastic lock arm during the elastic lock arm sliding over the projection.

Art Unit: 2833

With regard to claims 4, Kashiama et al disclose the recessed portion has a curved shape in cross-section (the cross-section in the mating direction)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Samejima et al.

With regard to claim 1, the admitted prior art (Fig. 4, 5 of the current application) disclose

a connector for preventing a half fitting condition comprises:

a first connector (70), including a tab terminal (72) and a projection (73),

a second connector (50), including a tab receiving terminal (82) for electrical connection to the tab terminal and an elastic lock arm (83) for sliding over the projection when the second connector is fitted into the first connector', and

a fitting detection member (90), mounted on the second connector so as

to slide in a direction of fitting of the first and second connectors,

wherein the fitting detection member is engaged with the

elastic lock arm in a half fitting condition of the first and second connectors',

and

wherein the fitting detection member is slidable to a completely-fitted detecting position in a completely-fitted condition of the male and second connectors.

The admitted prior art does not disclose a reduction member which reduce a frictional force generated by a contact between the projection and the elastic lock arm is formed on at

Art Unit: 2833

least one of the projection and the elastic lock arm.

Samejima et al (US 4,925,398) disclose a reduction member (the vertical edge of the lock arm 11 instead of being inclined as in the prior art) which reduce a frictional force generated by a contact between the projection (13) and the elastic lock arm (Fig. 9b – contact are between 11d and 13d significantly less than that in the case of the prior art) is formed on at the elastic lock arm (11) and on 13, which has a contact surface (13a) inclined to provide the minimal contact area.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the edge of the lock arm in the prior art as taught by Samejima et al, to decrease the friction between the projection and the arm.

With regard to claim 2 and 5, Samejima et al disclose that the reduction member (Fig. 7, 11b) has a triangular recessed portion (12b) which reduces a contact area between the projection and the elastic lock arm when (Fig. 8d) the elastic lock arm being slid over the projection (13)

With regard to claim 6, Samejima et al disclose the reduction member (the inclined contact surface of the projection) has a rib portion (13b)

2. Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Nutzel.

With regard to claim 1, the admitted prior art (Fig. 4, 5 of the current application) disclose a connector for preventing a half fitting condition comprises:

a first connector (70), including a tab terminal (72) and a projection (73),

a second connector (50), including a tab receiving terminal (82) for electrical connection to the tab terminal and an elastic lock arm (83) for sliding over the projection when the second connector is fitted into the first connector', and

a fitting detection member (90), mounted on the second connector so as

to slide in a direction of fitting of the first and second connectors,

wherein the fitting detection member is engaged with the

elastic lock arm in a half fitting condition of the first and second connectors',

and

Art Unit: 2833

wherein the fitting detection member is slidable to a completely-fitted detecting position in a completely-fitted condition of the male and second connectors.

The admitted prior art does not disclose a reduction member which reduce a frictional force generated by a contact between the projection and the elastic lock arm is formed on at least one of the projection and the elastic lock arm.

Nutzel (US 6,343,948) disclose a reduction member (the configuration of the hook 6) which reduce a frictional force generated by a contact between the projection (5) and the elastic lock arm (4) is formed on at the elastic lock arm (4) .

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the edge of the lock arm in the prior art as taught by Nutzel, to decrease the friction between the projection and the arm.

With regard to claim 2 and 4, Samejima et al disclose that the reduction member (Fig. 2) has recessed portion (hook configured) which reduces a contact area and has a curved shape.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Gilman whose telephone number is (703) 305-0847. The examiner can normally be reached on Monday-Friday, 10:30 a.m. - 8:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

01/22/2004



ALEXANDER GILMAN
PRIMARY EXAMINER